Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1.-14. (Canceled)

15. (Currently amended) A method for producing ~~a alcohol~~ an (S)-4-halo-3-hydroxybutyric acid ester derivative, the method comprising reacting an (R)-2-octanol dehydrogenase having a molecular weight of about 30,000 Da as determined by SDS-PAGE and about 83,000 Da as determined by gel filtration, or a microorganism producing the (R)-2-octanol dehydrogenase, ~~or a processed product of the microorganism~~ with a 4-haloacetoacetic acid ester derivative ~~ketone~~ to reduce the 4-haloacetoacetic acid ester derivative ~~ketone~~, wherein the (R)-2-octanol dehydrogenase is a polypeptide selected from the group from (a) to (e) below:

(a) a polypeptide encoded by a polynucleotide that hybridizes under stringent conditions with a nucleic acid probe consisting of the complement of the nucleotide sequence of SEQ ID NO: 1;

(b) a polypeptide comprising an amino acid sequence at least 70% identical to the amino acid sequence of SEQ ID NO:2;

(c) a polypeptide comprising the amino acid sequence of SEQ ID NO:2;

(d) a polypeptide comprising the amino acid sequence of SEQ ID NO:2 with up to 50 conservative amino acid substitutions; and

(e) a polypeptide comprising the amino acid sequence of SEQ ID NO:2 with up to 10 conservative amino acid substitutions.

~~has the following physicochemical properties (1) and (2):~~

~~(1) Action~~

~~i) The enzyme produces ketone by oxidizing alcohol using oxidized form of β-nicotinamide adenine dinucleotide as a coenzyme, and~~

~~ii) The enzyme produces alcohol by reducing ketone using reduced form of β-nicotinamide adenine dinucleotide as a coenzyme, and~~

~~(2) Substrate specificity~~

~~i) The enzyme preferentially oxidizes (R) 2-octanol of two optical isomers of 2-octanol, and~~

~~ii) The enzyme produces (S) 4-halo-3-hydroxybutyric acid esters by reducing 4-haloacetoacetic acid esters.~~

16. (Currently amended) The method of claim 15, wherein the microorganism is a transformant comprising a recombinant vector into which a polynucleotide encoding the (R)-2-octanol dehydrogenase is inserted.

17. (Canceled)

18. (Currently amended) The method of claim 15 ~~17~~, wherein the 4-haloacetoacetic acid ester derivative is 4-chloroacetoacetic acid ethyl ester and wherein the ~~alcohol~~ (S)-4-halo-3-hydroxybutyric acid ester derivative is (S)-4-chloro-3-hydroxybutyric acid ethyl ester.

19. (Canceled)

20. (Canceled)

21. (Currently amended) The method of claim 15, the method further comprising converting an oxidized form of β-nicotinamide adenine dinucleotide into a reduced form thereof.

22. (Canceled)

23. (Canceled)

24. (Canceled)

Please add new claims 25-38:

25. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase has an optimal pH for the reduction reaction in a range from 5.0 to 6.5.

26. (New) The method of claim 15, wherein the reacting step is carried out with the microorganism producing the (R)-2-octanol dehydrogenase, and said microorganism belongs to the genus *Candida* or the genus *Ogataea*.

27. (New) The method of claim 15, wherein the reacting step is carried out with the microorganism producing the (R)-2-octanol dehydrogenase, and the microorganism belongs to the genus *Pichia*.

28. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase is substantially pure, chemically treated, or in a cell-free extract.

29. (New) The method of claim 15, further comprising using a reduced form of β-nicotinamide adenine dinucleotide (NADH) as a coenzyme.

30. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase is encoded by a polynucleotide that hybridizes under stringent conditions with a nucleic acid probe consisting of the complement of the nucleotide sequence of SEQ ID NO: 1.

31. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase comprises an amino acid sequence at least 70% identical to the amino acid sequence of SEQ ID NO: 2.

32. (New) The method of claim 31, wherein the (R)-2-octanol dehydrogenase comprises an amino acid sequence at least 80% identical to the amino acid sequence of SEQ ID NO: 2.

33. (New) The method of claim 31, wherein the (R)-2-octanol dehydrogenase comprises an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2.

34. (New) The method of claim 31, wherein the (R)-2-octanol dehydrogenase comprises an amino acid sequence at least 95% identical to the amino acid sequence of SEQ ID NO: 2.

35. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase comprises the amino acid sequence of SEQ ID NO: 2.

36. (New) The method of claim 35, wherein the (R)-2-octanol dehydrogenase consists of the amino acid sequence of SEQ ID NO: 2.

37. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase comprises the amino acid sequence of SEQ ID NO:2 with up to 50 conservative amino acid substitutions.

38. (New) The method of claim 15, wherein the (R)-2-octanol dehydrogenase comprises the amino acid sequence of SEQ ID NO:2 with up to 10 conservative amino acid substitutions.